



## INTRODUCTION

Each year modifiable behaviors such as smoking, excessive alcohol consumption, overweight, and physical inactivity contribute to a substantial portion of the mortality and morbidity associated with chronic disease and unintentional injury (McKenna et al., 1998; Frazier et al., 1996). Underutilization of preventive health services (e.g., blood pressure, cholesterol, and cervical cancer screening) may also contribute to morbidity and premature death from many diseases. In 1999, 80% of Montana residents died, predominantly from chronic diseases and unintentional injuries (Table 1).

Measuring the prevalence of high risk behaviors and preventive health service utilization provides information for developing and monitoring interventions designed to reduce premature death and disease. From 1981 to 1983, the Centers for Disease Control and Prevention (CDC) funded 29 states to conduct point-in-time prevalence surveys of behaviors that were associated with an increased risk of developing avoidable illness and/or premature death (i.e., behavioral risk factors). In 1984, the CDC established the Behavioral Risk Factor Surveillance System (BRFSS), an annual telephone survey assessing the health status and behavioral risk factors of the adult population (18 years and older) within 15 participating states. Through cooperative agreements between CDC and state departments of public health, the BRFSS has expanded to include all 50 states, the District of Columbia, and three U.S. territories.

Montana has participated in the BRFSS since 1984. The number of Montana adults sampled annually has increased from 855 in 1984 to 1,188 in 1985, and to 1,800 in 1996. The number of questions included in the annual survey has increased from 45 questions in 1984 to 189 questions in 1999. In 1999, 150 interviews were completed each month. Subject areas include perceived health status, access to health care, health awareness, use of preventive services, as well as knowledge and attitudes of health care and health care practices.

The BRFSS survey provides valuable information on health trends, assessing chronic disease risk and monitoring the effectiveness and public awareness of policies, programs, and interventions. Additionally, these data are used to identify important health issues for future attention, formulate policies and legislation, and develop public awareness strategies.

The Healthy People 2000 (Public Health Service 1991, 1995) is a national initiative to improve the health of all Americans through prevention. "The initiative is driven by 319 specific national health promotion and disease prevention objectives targeted for achievement by the year 2000. Healthy People 2000's overall goals are to: 1) increase the span of healthy life, 2) reduce health disparities, and 3) achieve access to preventive services for all Americans."<sup>1</sup> In addition, national 2010 health objectives were released in January 2000<sup>2</sup> (U.S. Department of Health and Human Services 2000). Data from the annual BRFSS survey are the primary means of monitoring progress towards achieving specific national year 2000 health objectives (see Appendix A) and new 2010 objectives.

<sup>1</sup>See <http://www.odphp.osophs.dhhs.gov/pubs/hp2000/>

<sup>2</sup>See <http://www.health.gov/healthypeople/>

This report summarizes selected results from the 1999 survey. Results were tabulated for the overall Montana population, as well as for subpopulations (sex, age class, education level, income class, and two racial categories). The numbers reported in the data tables were the actual numbers of respondents, while the prevalence estimates (as percentages) were calculated using weighted data. Variation in risk behaviors and health characteristics among subpopulations were highlighted when appropriate. Graphs depicting point estimates over time were presented for selected health measures. As a measure of data reliability, 95% confidence intervals (CI) were presented with the percentage prevalence estimates. Readers unfamiliar with interpreting point estimates and confidence intervals may wish to consult the discussion on confidence intervals found in the Methods section of this report.

**Table 1. Behavioral Risk Factors Associated with the Leading Causes of Death in Montana, 1999<sup>+</sup>.**

Rank	Cause of Death	Number of deaths	Percentage of total deaths*	Associated Risk Factors
1	Heart disease	2,034	25.2	Smoking, lack of physical activity, high blood pressure, high-fat diet, high blood cholesterol, over-weight
2	Cancer	1,845	22.8	Smoking, high-fat diet, chronic drinking, environmental exposure
3	Cerebrovascular disease (including stroke)	591	7.3	High-blood pressure, smoking, high blood cholesterol
4	Chronic obstructive pulmonary disease	566	7.0	Smoking, environmental exposure
5	Unintentional injury	461	5.7	Binge and chronic drinking, smoking, non-use of safety belts.
6	Pneumonia and influenza	248	3.1	Smoking
7	Diabetes	243	3.0	Overweight, diet
8	Alzheimer's disease	204	2.5	Binge and chronic drinking
9	Suicide	161	2.0	Unknown
10	Nephritis, Nephrotic Syndrome & Nephrosis	93	1.1	Risk factors associated with hypertension and diabetes, prolonged use of analgesics
	Total deaths from leading causes	6,446	79.7	

<sup>+</sup>Mortality data are from the Montana Department of Public Health and Human Services, Vital Statistics Bureau, 2000.

\*Total deaths from all causes in 1999, excluding fetal deaths, was 8,082.